

**Case 3368*****Eatoniella* Dall, 1876 and EATONIELLIDAE Ponder, 1965 (Mollusca, Gastropoda): proposed conservation**

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**Abstract.** The purpose of this application, under Article 23.9.3 of the Code, is to conserve the names *Eatoniella* Dall, 1876 and EATONIELLIDAE Ponder, 1965, which are junior subjective synonyms of *Paludestrina* d'Orbigny, 1840 and PALUDESTRINIDAE Newton, 1891, respectively. To date, *Paludestrina* d'Orbigny, 1840 and PALUDESTRINIDAE Newton, 1891 have been regarded as junior objective synonyms of *Hydrobia* Hartmann, 1821 and HYDROBIIDAE Troschel, 1857 based on the designation of *Cyclostoma acutum* Draparnaud, 1805 as type species of *Paludestrina* by Bourguignat, 1887. However, the earlier and overlooked type species designation of *Paludina nigra* d'Orbigny, 1840 by Nevill (1885) as the type species of *Paludestrina* renders *Paludestrina* a subjective synonym of *Eatoniella*. The names *Paludestrina* and PALUDESTRINIDAE have never been used in the sense of *Eatoniella* and EATONIELLIDAE, but have been frequently used mistakenly in the sense of *Hydrobia* and HYDROBIIDAE. To avoid confusion, the suppression of *Paludestrina* and PALUDESTRINIDAE is proposed. *Paludina nigra* d'Orbigny, 1840 is a junior homonym of *Paludina nigra* Quoy & Gaimard, 1835 and its junior subjective synonym *Eatoniella latina* Marincovich, 1973 is proposed as a replacement name.

**Keywords.** Nomenclature; taxonomy; HYDROBIIDAE; PALUDESTRINIDAE; EATONIELLIDAE; *Hydrobia*; *Paludestrina*; *Eatoniella*; *Paludina nigra*; *Eatoniella kerguelensis*; *Eatoniella latina*; Indian Ocean; Pacific; gastropods.

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1. E.A. Smith (1875, p. 70), proposed the new gastropod genus *Eatonia* with three new species included, *E. kerguelensis* (pp. 70–71), *E. caliginosa* (p. 71) and *E. subrufescens* (p. 71), all from Kerguelen Islands in the Indian Ocean. Dall (1876, p. 42) replaced *Eatonia* E.A. Smith, 1875 with *Eatoniella*, because of the existence of the senior homonym *Eatonia* Hall, 1857 (pp. 90–92). *Eatonia kerguelensis* E.A. Smith, 1875 was designated as the type species of *Eatoniella* by Nevill (1885, p. 129). In a revision of *Eatoniella* and related genus-group taxa, Ponder (1965, pp. 50–51) proposed the family name EATONIELLIDAE.

2. The nominal taxa *Eatoniella* and EATONIELLIDAE have been treated in several taxonomic studies since 1965 (Castellanos & Fernandez, 1972a, 1972b; Marincovich, 1973; Ponder & Yoo, 1977; Ponder, 1983, 1988; Ponder & Worsfold, 1994) and have been used in other publications based on these papers. Numerous species have been attributed to *Eatoniella*, usually from marine intertidal and shallow subtidal habitats of the southern hemisphere. 101 species-group names have since 1965 (i.e. since the work of Ponder (1965) who redefined the genus) been treated in at least one paper as

the potentially valid names for species-group taxa in the genus *Eatoniella*. Excluding objective synonyms, 99 potentially valid species and/or subspecies are represented by these 101 names. The generic name *Eatoniella* has been consistently used since it was established as a valid name for a genus-group taxon typified by *Eatonia kerguelensis*, although many species now assigned to *Eatoniella* were originally assigned to other nominal genera.

3. D'Orbigny (1840, p. 381) introduced *Paludestrina* as a subgenus of *Paludina* Férussac, 1813 without fixing a type species. D'Orbigny attributed a large number of South American species to *Paludestrina*, and also the European *Cyclostoma acutum* Draparnaud, 1805. All authors mentioning the type species have accepted Pilsbry's view (1897, p. 119) that the type species of *Paludestrina* is *Cyclostoma acutum* Draparnaud, 1805 (p. 40, pl. 1, fig. 23), by subsequent designation by Bourguignat (1887, pp. 9–10) (see Pilsbry, 1911, p. 552; Hannibal, 1912, p. 185; Cossmann, 1921, p. 98; Pilsbry & Bequaert, 1927, p. 221; Kabat & Hershler, 1993, p. 41). This would render *Paludestrina* a junior objective synonym of *Hydrobia* Hartmann, 1821 and the family name PALUDESTRINIDAE Newton, 1891 (p. 226) a junior synonym of HYDROBIIDAE Troschel, 1857 (p. 106). The type species of the genus *Hydrobia* Hartmann, 1821 (1821a, p. 258) is *Cyclostoma acutum* Draparnaud, 1805, designated subsequently by Gray (1847, p. 151). *Hydrobia* Hartmann, 1821 is the type genus of the family-group name HYDROBIINAE Troschel, 1857. *Hydrobia* Hartmann, 1821 and HYDROBIINAE Troschel, 1857 have been placed on the respective Official Lists in Opinion 2034 (June, 2003). In the 19th and early part of the 20th century the names *Hydrobia* Hartmann and HYDROBIINAE Troschel were rejected by many workers because of the supposed homonymy of *Hydrobia* Hartmann, 1821 with *Hydrobius* Leach, 1815 and HYDROBIINAE Troschel, 1857 with the family-group name HYDROBIINA [emended to HYDROBIUSINA — see Opinion 2034] Mulsant, 1844 based on *Hydrobius* Leach, 1815 (Coleoptera). However, homonymy existed only in the family-group names because of the identical stem of *Hydrobia* and *Hydrobius*. This problem and other matters associated with the name *Hydrobia* were resolved in Opinion 2034.

4. However, the earliest valid type species designation for *Paludestrina* d'Orbigny, 1840 is by Nevill (1885, p. 46) of *Paludina* (*Paludestrina*) *nigra* d'Orbigny, 1840 (livraison 49, p. 387; figured in livr. 53 (1841), pl. 75, figs. 16–18) from the lower intertidal zone near Arica, Peru. Ponder & Worsfold, 1994 (pp. 14–15, figs. 5f, 7e, 9c, 10a) figured a syntype (fig. 10a) and redescribed the species *Paludina* (*Paludestrina*) *nigra*, which they placed in *Eatoniella* (*Eatoniella*). Ponder & Worsfold (1994, p. 15) recognized *Eatoniella* (*Eatoniella*) *latina* Marincovich, 1973 (p. 26, figs. 51, 57, 58) from the lower intertidal zone at Iquique, Chile, as a junior subjective synonym of *Paludina* (*Paludestrina*) *nigra*, but did not notice the primary homonymy between *Paludina* (*Paludestrina*) *nigra* d'Orbigny, 1840 and *Paludina nigra* Quoy & Gaimard, 1834 (p. 174), figured by Quoy & Gaimard (1833, pl. 58, figs. 9–12 under the vernacular name 'Paludine noire'), because they incorrectly quoted the original binomen of d'Orbigny's species as *Paludestrina nigra*. The species name *Eatoniella latina* Marincovich, 1973 appears to be the earliest valid name for the type species of *Paludestrina* d'Orbigny, 1840. Nevill (1885) continued to use the name *Paludestrina* in the accustomed sense, as equivalent to *Hydrobia*. He was not aware of the taxonomic relationships of *Paludina nigra* d'Orbigny, because only the shell was known at that time, which is very similar to the ranges of shell forms known from the

HYDROBIIDAE s. l.; the transfer of *Paludina nigra* d'Orbigny to *Eatoniella* was first made by Ponder & Worsfold (1994).

5. The substitution, for the purposes of the Principle of Priority, of the names *Eatoniella* Dall, 1876 and EATONIELLIDAE Ponder, 1965 by their senior subjective synonyms *Paludestrina* d'Orbigny, 1840 and PALUDESTINIDAE Newton, 1891 would be a major upset of nomenclature for two reasons: (a) the names *Eatoniella* Dall, 1876 and EATONIELLIDAE Ponder, 1965 have been in use since they were established for a species-rich group of small shallow marine gastropods of the southern hemisphere. Except for the name *Paludina* (*Paludestrina*) *nigra* d'Orbigny, 1840 and two other nominal species, none of the taxa here included was ever associated with the names *Paludestrina* d'Orbigny, 1840, or with PALUDESTINIDAE, or with their presumed synonyms *Hydrobia* and HYDROBIIDAE (s. l.); (b) the names *Paludestrina* d'Orbigny, 1840 and PALUDESTINIDAE Newton, 1891 have after 1879 without exception been considered as synonyms of *Hydrobia* Hartmann, 1821 and HYDROBIIDAE Troschel, 1857 respectively and have been treated either as the valid names for the respective taxa, or as their objective synonyms. The HYDROBIIDAE (s. l.), as understood in the 19th and in the major part of the 20th century, occur mainly in Europe, northern Asia, North and South America and Australia and live in fresh and brackish water habitats. The name *Paludestrina* alludes to these habitats, meaning 'Paludina aestuarina' (= estuarine *Paludina*; *Paludina* is a genus of freshwater gastropods). By contrast, all known taxa of the EATONIELLIDAE live in shallow marine to intertidal habitats of the southern hemisphere.

6. In support of this application, three listings of literature references are held by the Commission Secretariat: (1) uses of *Eatoniella* and EATONIELLIDAE as valid names since 1965; (2) species currently included in *Eatoniella*; (3) uses of *Paludestrina* and PALUDESTINIDAE as valid names or synonyms and the taxonomic concepts associated with them.

7. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
  - (a) *Paludestrina* d'Orbigny, 1840;
  - (b) PALUDESTINIDAE Newton, 1891;
- (2) to place on the Official List of Generic Names in Zoology the name *Eatoniella* Dall, 1876 (gender: feminine), type species by subsequent designation by Nevill (1885) *Eatonia kerguelensis* E.A. Smith, 1875;
- (3) to place on the Official List of Specific Names in Zoology the following names:
  - (a) *kerguelensis* E.A. Smith, 1875, as published in the binomen *Eatonia kerguelensis* (specific name of the type species of *Eatoniella* Dall, 1876);
  - (b) *latina* Marinovich, 1973, as published in the binomen *Eatoniella latina*, replacement name for *Paludina nigra* d'Orbigny, 1840;
- (4) to place on the Official List of Family-Group Names in Zoology the name EATONIELLIDAE Ponder, 1965, type genus *Eatoniella* Dall, 1876;
- (5) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Paludestrina* d'Orbigny, 1840, as suppressed in (1)(a) above;



- (6) to place on the Official Index of Rejected and Invalid Family-Group Names in Zoology the name PALUDESTRIDAE Newton, 1891, as suppressed in (1)(b) above.

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